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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/007,784	11/13/2001	Christopher A. Wiklof	1788-22-3	1821

7590 01/02/2003

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EXAMINER

ALLEN, DENISE S

ART UNIT

PAPER NUMBER

2872

DATE MAILED: 01/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/007,784

Applicant(s)

WIKLOF ET AL.

Examiner

Denise S Allen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 June 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7,8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### DETAILED ACTION

Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 119(e) as follows:

- ✓ An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence of the specification or in an application data sheet (37 CFR 1.78(a)(2) and (a)(5)).

#### *Information Disclosure Statement*

The reference, EP Search Report for PCT/US 02/02413, listed on the information disclosure statement filed November 14, 2002 and lined through has not been considered because it is a search report. It has been placed in the application file, whereas the references referred to therein have already been considered as to their merits because the references are included in the information disclosure statement. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).

#### *Drawings*

The corrected or substitute drawings were received on June 11, 2002. These drawings are not acceptable.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: reference 106 (page 4 line 19), reference 108 (page 5 line 22), reference 130 (page 6 line 16), reference 120 (page 7

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line 2), and reference 718 (page 9 line 17). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: Figures 9A and 9B reference 801. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Specification*

The disclosure is objected to because of the following informalities:

✓ The phrase “a controller 135” is unclear because it does not agree with Figure 1 where reference 135 is clearly an arrow. Suggested correction: replace the phrase “a controller 135” with “a controller”.

✓ There are not brief descriptions of Figures 1 – 20. Suggested correction: add brief descriptions for Figures 1 – 20.

Appropriate correction is required.

### *Claim Objections*

✓ Claim 3 is objected to because of the following informalities: the limitation “the return beam” (line 2) lacks antecedent basis because it is not previously recited in claims 1 or 3. Suggested correction: replace the limitation “the return beam” with “a return beam”.

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✓ Claim 7 is objected to because of the following informalities: the limitation “with he second magnet” (line 2) is unclear because of the use of the pronoun “he”. Suggested correction: replace the limitation “with he second magnet” with “with the second magnet”.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 – 3, 5, 6, and 21 – 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Shepard et al.

Regarding claims 1 and 21, Shepard et al teaches a scanner (Figure 10), comprising: a beam generator (reference 170) operable to generate a scan beam (arrow coming from reference 170); a beam-reflector assembly (references 152, 154, and 156) having a first magnet (reference 156) and operable to sweep the scan beam (column 10 line 32 – column 11 line 59); and a beam-sweep mechanism (references 158, 160, 162, and 164) having a second magnet (reference 158) and operable to activate the beam-reflector assembly by exerting a first force on the first magnet with the second magnet (column 10 lines 55 – 58).

Regarding claim 2, Shepard et al teaches the beam generator comprising a laser diode (Figure 8 reference 122).

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Regarding claims 3 and 22, Shepard et al teaches a beam detector (Figure 8 reference 114) operable to read a return beam (lines coming from reference 112) reflected from a target (reference 120).

Regarding claims 5 and 23, Shepard et al teaches the beam-sweep mechanism causes the beam-reflector assembly to rotate back and forth by exerting the first force on the first magnet with the second magnet (column 10 lines 55 – 58).

Regarding claims 6 and 24, Shepard et al teaches the beam-sweep mechanism causes the beam-reflector assembly to rotate back and forth and damps the rotation by exerting the first force on the first magnet with the second magnet (column 11 lines 3 – 21).

Claims 1, 7 – 10, 21, 25, and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Dvorkis et al.

Regarding claims 1 and 21, Dvorkis et al teaches a scanner (Figure 8), comprising: a beam generator (not shown) operable to generate a scan beam (not shown); a beam-reflector assembly (reference 220) having a first magnet (reference 228) and operable to sweep the scan beam (column 11 line 45 – column 12 line 5); and a beam-sweep mechanism (reference 230) having a second magnet (reference 230) and operable to activate the beam-reflector assembly by exerting a first force on the first magnet with the second magnet (column 11 line 63 – column 12 line 2).

Regarding claim 7, Dvorkis et al teaches the beam-sweep mechanism deactivates the beam-reflector assembly by exerting a second force on the first magnet with the second magnet, the second force being opposite to the first force (column 12 lines 10 – 26).

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Regarding claim 8, Dvorkis et al teaches the beam-sweep mechanism is operable to retain the beam-reflector assembly in a home position by exerting a second force on the first magnet with the second magnet, the second force being opposite to the first force (column 12 lines 27 – 37).

Regarding claims 9 and 25, Dvorkis et al teaches the beam-sweep mechanism causes the beam-reflector assembly to rotate back and forth by exerting the first force on the first magnet with the second magnet (column 11 line 63 – column 13 line 2) and causes the beam-reflector assembly to return to a home position by exerting a second force on the first magnet with the second magnet, the second force being opposite to the first force (column 12 lines 2 – 37).

Regarding claims 10 and 26, Dvorkis et al teaches a scanner (Figure 8), comprising a beam generator (Figure 7 reference LASER) operable to generate a scan beam; a beam detector operable to read a return beam reflected from a target; a beam reflector assembly having a mirror (Figure 8 reference 220) and a first magnet (reference 228), the mirror operable to sweep the scan beam across the target; and a beam-sweep mechanism having a second magnet (reference 232) and operable to, retain the mirror of the beam-reflector assembly in and return the mirror to a home position by attracting the first magnet with the second magnet (column 12 lines 15 – 19), and rotate the mirror of the beam-reflector assembly back and forth in an underdamped manner by repelling the first magnet with the second magnet (column 11 line 63 – column 12 line 2).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 15 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shepard et al in view of Peng.

Regarding claim 4, Shepard et al teaches a scanner as described above. Shepard et al does not teach a beam-reflector assembly comprising a multi-faceted mirror that is operable to reflect the scan beam onto a target.

Peng teaches a beam-reflector assembly (Figure 13) comprising a multi-faceted mirror (reference 22) that is operable to reflect the scan beam (reference 1) onto a target (reference 48) and is operable to rotate the mirror to sweep the scan beam across the target when the beam reflector assembly is activated by the beam-sweep mechanism (reference 8). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the beam-reflector assembly of Peng in the scanner of Shepard et al in order to make multiply scans in one cycle of the beam sweep mechanism.

Regarding claim 15, Shepard et al teaches a scanner as described above. Shepard et al does not teach a beam-sweep mechanism having a second magnet configured for mechanical movement between a first position in which the second magnet attracts the first magnet and a second position in which the second magnet repels the first magnet.

Peng teaches a beam-sweep mechanism (Figures 5 and 6) having a second magnet (reference 17) configured for mechanical movement between a first position in which the second magnet attracts the first magnet and a second position in which the second magnet repels the first magnet (column 6 lines 60 – 62). It would have been obvious to one of ordinary skill in the art at



the time of the invention to use the beam-sweep mechanism of Peng in the scanner of Shepard et al in order to move the beam-reflector in two directions.

Regarding claim 16, Shepard et al teaches the beam generator comprising a laser diode (Figure 8 reference 122).

Regarding claim 17, Shepard et al teaches the beam-reflector assembly comprises a rotatable mirror (Figure 10 reference 152).

Regarding claim 18, Shepard et al teaches a button (Figure 2 reference 13) coupled to the beam-sweep mechanism, the button designed to be pushed with an operator's thumb.

Regarding claim 19, Peng teaches the beam-sweep mechanism causes the beam-reflector assembly to sweep the scan beam when the second magnet repels the first magnet (Figure 6).

Regarding claim 20, Shepard et al teaches the beam-sweep mechanism causes the beam-reflector assembly to remain in or to move to a home position when the second magnet repels the first magnet (Figure 10).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dvorkis et al in view of Peng.

Dvorkis et al teaches a scanner as described above. Dvorkis et al does not teach the beam-reflector assembly is operable to direct the return beam to the beam detector while sweeping the scan beam across the target.

Peng teaches a beam-reflector assembly (Figure 8 reference 2) operable to direct the return beam (arrows in opposite direction of reference 1) to the beam detector (reference 50) while sweeping the scan beam (reference 1) across the target (reference 48). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the beam-reflector

assembly of Peng in the scanner of Dvorkis in order to reduce the number of parts required to generate a scan beam and detect a return beam.

Claims 12 – 14 and 27 – 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dvorkis et al in view of Shepard et al.

Regarding claims 12 and 27, Dvorkis et al teaches a scanner as describe above. Dvorkis et al does not teach a button that is coupled to the beam-sweep mechanism and that is operable to cause the beam-sweep mechanism to rotate the mirror of the beam-reflector assembly back and forth when pushed and cause the beam-sweep mechanism to retain the mirror of the beam-reflector assembly in or return the mirror to the home position when released.

Shepard et al teaches a button (Figure 2 reference 13) that is coupled to the beam-sweep mechanism (reference 24) and that is operable to cause the beam-sweep mechanism to rotate the mirror (reference 22) of the beam-reflector assembly back and forth when pushed and cause the beam-sweep mechanism to retain the mirror of the beam-reflector assembly in or return the mirror to the home position when released (column 6 line 25 – column 7 line 32). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the button of Shepard et al in the scanner of Dvorkis et al in order to provide a means to activate the scanner.

Regarding claims 13 and 28, Shepard et al teaches a button (Figure 2 reference 13) and a trigger mechanism (reference 40) coupled to the button and the beam-sweep mechanism (reference 24) and operable to cause the beam-sweep mechanism to rotate the mirror of the beam-reflector assembly back and forth only when the button is pushed a first predetermined distance from a button-released position and cause the beam-sweep mechanism to return the mirror of the beam-reflector assembly to the home position only when the button is released a

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second predetermined distance from a button-pushed position (column 6 line 25 – column 7 line 32).

Regarding claims 14 and 29, Shepard et al teaches a button (Figure 2 reference 13) and a trigger mechanism (reference 40) coupled to the button and the beam-sweep mechanism (reference 24) and operable to cause the beam-sweep mechanism to rotate the mirror of the beam-reflector assembly back and forth only when the button is pushed with at least a first predetermined force and cause the beam-sweep mechanism to return the mirror of the beam-reflector assembly to the home position only when the pushing force on the button drops to or below a second predetermined force (column 6 line 25 – column 7 line 32).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Denise S Allen whose telephone number is (703) 305-7407. The examiner can normally be reached on Monday - Friday, 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cassandra Spyrou can be reached on (703) 308-1687. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

Denise S Allen  
Examiner  
Art Unit 2872

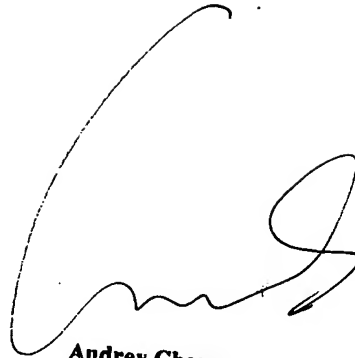
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A handwritten signature in black ink, appearing to be 'dsa'.

December 29, 2002

A large, stylized handwritten signature in black ink, likely belonging to Audrey Chang.

**Audrey Chang**  
**Primary Examiner**  
**Technology Center 2800**